# Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

# **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	05/17/2018 05/17/2018	Richard Willoughby

LM Start		Rating **	M	Issue No.		6	
LM End		Issue Type +	Ма	Location *		N/A	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Calegory				Start		End	
Item	Flood Pre	paredness &	Training		0		0
пеш					0		0
DWR ID	DWR_RD0	001_01_s _ 201	3_6				
		Comn	nent Cod	le			
	Inspector Comment						
	The LMA has not attended a flood fight training class in the past few years. They do have an emergency plan.						

No Photos

Rating \*\* Issue No. Α 8 LM Start Issue Type + LM End Ma Location \* N/A Earthen Levee GPS Latitude/Longitude Category Start End **Emergency Supplies &** Equipment

DWR ID DWR\_RD0001\_01\_s \_ 2013\_8

Comment Code

Inspector Comment

The LMA has emergency supplies on-site.

No Photos

N: Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

# **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	05/17/2018 05/17/2018	Richard Willoughby

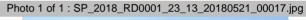
LM Start		Rating **	Α	Issue No.		9	
LM End		Issue Type +	Ма	Location *		N/A	
Category	Earthen L	evee		GPS La	atitud	le/Longitude	
Calegory				Start		End	
Item		Operations & Maintenance			٥		0
item	Manuals				0		0
DWR ID	DWR_RD0	001_01_s _ 201	3_9	'			
		Comn	nent Cod	le			
	Inspector Comment						
The LMA h	nas a copy	of the O&M N	/lanual a	vailable at t	the c	office.	

No Photos

L NA C4= ==4	0.00	Rating **	М	Issue No.		13
LM Start	0.00	rtating	IVI	13300 140.		13
LM End	1.14	Issue Type +	Ma	Location *	WS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude
Calegory				Start		End
Item	Vegetatio	n		37.8225	17°	37.811681°
item				-121.3755	06°	-121.384967°
DWR ID DWR_RD0001_01_s _ 2018_13						
		Comn	nent Cod	le		

V1 : Control annual grass and weeds on the levee slopes and easements.

### Inspector Comment





Looking at typical view of waterward slope.

LM Start	0.00	Rating **	М	Issue No.		2
LM End	1.14	Issue Type +	Ma	Location *		LS
Category	Earthen L	.evee	GPS Latitude/Longitude			
Calegory	zategory					End
Item	Vegetatio	n		37.8225	16°	37.811680 °
пеш			-121.3755	06 °	-121.384968 °	
DWR ID DWR_RD0001_01_s _ 2018_2						
		Cama	ant Car	ام		

### Comment Code

V1 : Control annual grass and weeds on the levee slopes and easements.

### Inspector Comment



Looking at typical view of landward slope.

* Location	** Rating		+ Issue Type
LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

# **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	05/17/2018 05/17/2018	Richard Willoughby

LM Start	0.03	Rating **	М	Issue No.		16	
LM End	0.03	Issue Type +	Ma	Location *		LS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Calegory				Start		End	
Item	Trim / Thi	n Trees		37.8223	90°	37.822390 °	
пеш				-121.3760	84 °	-121.376084 °	
DWR ID	DWR_RD0	001_01_s _ 201	8_16				
		Comn	nent Cod	le			
T1: Trim t	rees to at	east five feet	above g	round level.			
		Inspecto	or Comm	nent			

No Photos

LM Start	0.17	Rating **	N	Issue No.		12	
LM End	0.17	Issue Type +	Ма	Location *	Location * WS		
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Calegory	Start						
Item	Trim / Thi	n Trees		37.8213	76°	37.821376	0
item				-121.3780	44 °	-121.378044	0
DWR ID DWR_RD0001_01_s _ 2014_12							
Comment Code							

\_\_\_\_\_

T5 : Tree stumps.

### Inspector Comment

Remove stump when it becomes rotted to prevent possible seepage path along the roots.

Photo 1 of 1 : SP\_2018\_RD0001\_23\_12\_20180323\_00010.jpg



View of the tree stump on the waterside levee slope.

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

# **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	05/17/2018 05/17/2018	Richard Willoughby

LM Start	0.21	Rating **	M	Issue No.	18		
LM End	0.21	Issue Type +	Ma	Location *		LS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Calegory				Start		End	
Item	Erosion /	Bank Caving		37.8208	06 °	37.820806°	
item				-121.3782	60°	-121.378260 °	
DWR ID	DWR_RD0	001_01_s _ 201	7_18				
		Comn	nent Cod	le			
E2 : Sched	dule repair	of erosion site	e prior to	the next in	spec	ction.	
		Inspecto	or Comm	nent			



View of the erosion on the levee slope.

LM Start	0.31	Rating **	М	Issue No.		11	
LM End	0.33	Issue Type +	Ma	Location *			
Category	Supplemental			GPS La	titud	e/Longitude	
Calegory				Start		End	
Item	2017 Stor	m Damage		37.8203	00°	37.820200	٥
пеш			-121.3795	00°	-121.379800	٥	
DWR ID	DWR_RD0001_01_f _ 2017_11						

### Comment Code

### Inspector Comment

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

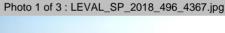
Site ID No:496

Site Designation:LMA-402

Repair Type: Erosion Rating:Area of Concern

Field Date:8/18/2017

Notes: Start of outside bend. Minor toe erosion has displaced riprap.





N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma: Maintenance Deficiancy

Ob: Design & System Obsolescence

En: Enforcement

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

# **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	05/17/2018 05/17/2018	Richard Willoughby

LM Start	0.31	Rating **	М	Issue No.	ssue No. 11 (cont)		
LM End	0.33	Issue Type +	Ma	Location *	cation *		
Category	ental	GPS La	atitud	le/Longitude			
Calegory				Start		End	
Item	2017 Stor	m Damage		37.8203	00°	37.820200 °	
пеш				-121.3795	00°	-121.379800 °	
DWR ID	R ID DWR_RD0001_01_f _ 2017_11						
	Comment Code						

## Inspector Comment

Levee Evaluation Comments

Description:Slope protection repairs are needed along the waterside slope due to erosion and riprap displacement from high water. Based upon levee inspections, it was determined the waterside levee slope is eroding, deteriorating, and degrading. The eroded levee sections need to be restored back to design standards to prevent further deterioration and damage.

Site ID No:496

Site Designation:LMA-402

Repair Type: Erosion

Rating:Area of Concern

Field Date:8/18/2017

Notes: Start of outside bend. Minor toe erosion has displaced riprap.

LM Start	0.31	Rating **	М	Issue No.	11 (cont)
LM End	0.33	Issue Type +	Ma	Location *	



Photo 3 of 3: LEVAL\_SP\_2018\_496\_4374.jpg



N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy

Ob : Design & System Obsolescence

En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

# **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	05/17/2018 05/17/2018	Richard Willoughby

LM Start	0.44	Rating **	U	Issue No.	14		
LM End	0.44	Issue Type +	Ма	Location *		LS	
Category	Earthen L	evee		GPS La	atitud	le/Longitude	
Calegory				Start		End	
Item	Animal Co	Animal Control				37.818898 °	
пеш				-121.3803	32 °	-121.380332 °	
DWR ID	DWR_RD0	001_01_s _ 201	6_14				
		Comn	nent Coc	le			
A1 : Exterr	minate rod	ents and back	fill and c	compact or	grou	it burrows.	
	Inspector Comment						
Active rode	ent den a s	size of a covot	e or fox.				



View of the large rodent hole on the landside levee slope.

LM Start	0.45	Rating **	U	Issue No.		10	
LM End	0.45	Issue Type + Ma		Location *		LS	
Category	Earthen L	GPS La	atitud	e/Longitude			
Calegory						End	
Item	Animal Co	ontrol		37.8187	53°	37.818753	0
iteiii				-121.3802	49°	-121.380249	0
DWR ID	DWR ID DWR_RD0001_01_s _ 2016_10						

### Comment Code

A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

### Inspector Comment

Backfill and compact levee slope with acceptable levee fill.

## Photo 1 of 1: SP\_2018\_RD0001\_23\_10\_20180323\_00006.jpg



View of the large rodent hole on the landside levee slope.

LM Start	0.51	Rating **	М	Issue No.		5
LM End	0.51	Issue Type +	Ма	Location *		LS
Category	Earthen Levee			GPS Lat	tud	e/Longitude
Calegory			Start		End	
Item	Slope Sta	bility		37.81800	3°	37.818003 °
пеш			-121.37984	5 °	-121.379845 °	
DWR ID	DWR_RD0001_01_f _ 2015_5					

## Comment Code

S1 : Repair slope instability.

### Inspector Comment

About a 1 ft. vertical cut is observed at the landside levee toe. Repair the landside levee toe per O&M standards.

### Photo 1 of 1: SP\_2018\_RD0001\_23\_5\_20180323\_00004.jpg



View of the vertical cut at the landside levee toe.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

# **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	05/17/2018 05/17/2018	Richard Willoughby

-							
LM Start	0.52	Rating **	М	Issue No.		7	
LM End	0.52	Issue Type +	Ма	Location *		LS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Calegory				Start		End	
Item	Erosion /	Bank Caving		37.8178	25 °	37.817825 °	
пеш				-121.379811 °		1 ° -121.379811 °	
DWR ID	DWR_RD0	001_01_s _ 201	6_7				
		Comn	nent Cod	le			
E2 : Sched	dule repair	of erosion site	e prior to	the next in	spec	ction.	
		Inspecto	or Comm	nent			



View of the erosion on the landside levee slope.

Photo 1 of 1: SP\_2018\_RD0001\_23\_15\_20180323\_00012.jpg

LM Start	0.67	Rating **	U	Issue No.		15
LM End	0.67	Issue Type +	Ма	Location *		LS
Category	Earthen L	Earthen Levee			atitud	e/Longitude
Calegory			Start		End	
Item	Animal Co	ontrol		37.8170	47°	37.817047°
iteiii			-121.3823	42 °	-121.382342 °	
DWR ID	DWR_RD0001_01_f _ 2016_15					

Comment Code

A1: Exterminate rodents and backfill and compact or grout burrows.

### Inspector Comment

Burrow entrance is about 18 inches by 10 inches.



View of the large rodent burrow in the landside levee slope.

N: Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type Ma : Maintenance Deficiancy
Ob : Design & System Obsolescence En: Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

# **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	05/17/2018 05/17/2018	Richard Willoughby

0.76						
0.70	Issue Type +	Ma	Location * LS		LS	
Category Earthen Levee		GPS Latitude/Longitude				
			Start		End	
nimal Co	Control		37.81588	31 °	37.815881 °	
Item			-121.38270	)4°	-121.382704°	
DWR ID DWR_RD0001_01_f _ 2015_4						
	nimal Co	nimal Control	nimal Control	Start nimal Control 37.81588 -121.38270	Start nimal Control 37.815881 ° -121.382704 °	

### Comment Code

A1: Exterminate rodents and backfill and compact or grout burrows.

### Inspector Comment

Large burrow in the landside levee slope. Possible fox den. Cobwebs are visible in the hole. Fall 2016.



View of a large rodent hole on the landside levee slope.

LM Start	1.08	Rating **	М	Issue No.		3	
LM End	1.08	Issue Type +	Ма	Location *		LS	
Category Earthen Levee			GPS Latitude/Longitude				
Calegory				Start		End	
Itom	Slope Stability		37.8120	23 °	37.812023 °		
item		-121.3839	61 °	-121.383961 °			
DWR ID DWR_RD0001_01_s _ 2016_3							

### Comment Code

S3 : Repair the levee slope damaged by vehicle traffic and prevent access where possible.

### Inspector Comment

Repair slope damaged by vehicle by placing and compacting acceptable levee material.

LM Start	1.08	Rating **	М	Issue No.	3 (cont)
LM End	1.08	Issue Type +	Ma	Location *	LS

## Photo 1 of 2: SP\_2018\_RD0001\_23\_3\_20180323\_00001.jpg



View of the landside slope damaged by farm equipment.

Photo 2 of 2: SP\_2018\_RD0001\_23\_3\_20180323\_00002.jpg



View of the ruts on the levee slope overgrown with vegetation.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable WS : Water Side CR : Crown	A : Acceptable M : Minimally Acceptable U : Unacceptable	N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain	Ma : Maintenance Deficiancy Ob : Design & System Obsolescence En : Enforcement

# Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

# **Reclamation District No. 0001 Union Island**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Old River	Right	1.14	05/17/2018 05/17/2018	Richard Willoughby

LM Start	1.13	Rating **	M	Issue No.		19		
LM End	1.13	Issue Type +	Ма	Location *	LS			
Category	Earthen Levee			GPS Latitude/Longitude				
Calegory		Start		End				
Item	Trim / Thin Trees			37.811714°		° 37.811714		
item			-121.384876 °		° -121.384876 °			
DWR ID DWR_RD0001_01_s _ 2018_19								
		Comn	nent Cod	le				
T1 : Trim t	rees to at l	east five feet	above g	round level				
Inspector Comment								



Looking west at untrimmed tree at landward toe. (Spring 2018)

N: Not Inspected/Rated C: Corrected A/W: Acceptable but Monitor & Maintain + Issue Type

Ma : Maintenance Deficiancy

Ob : Design & System Obsolescence

En : Enforcement